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Mother Knows Best? Mother and Child Report of Behavioral Difficulties of Children of HIV-Infected Mothers

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Children of HIV-infected mothers have more psychosocial adjustment difficulties than do those of noninfected mothers. In this study, child psychosocial adjustment in children of HIV-infected women is examined across the three stages of HIV-infected: asymptomatic, symptomatic and AIDS. Participants were 99 HIV-infected women and 148 noninfected women. Children were not identified as being HIV infected. Mother and child reports of behavioral difficulties are compared, and competing hypotheses about mother report of child behavior difficulties are tested. Results indicate an ascending linear trend for child report of internalizing and externalizing difficulties from the noninfected stage through increasingly severe stages of HIV-infection. According to mother report, child externalizing and internalizing difficulties are nonlinear, as mothers report an increase through the infected symptomatic stage, then a decrease in the AIDS stage. Implications for assessment, prevention and intervention in families with maternal HIV infection are discussed.

KEY WORDS: HIV-infected mothers; asymptomatic/symptomatic; child behavior difficulties.

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INTRODUCTION

If psychology had a Manhattan project, it would be AIDS (Fowler, 1998). This disease presents a worldwide problem and despite millions of dollars spent on research, we are no closer to a cure. Furthermore, present treatments are astronomically expensive, costing approximately $15-$25,000 a year per individual (Flower, 1998; Gordon, King, Wingert, Gegax, Miller, & Kalb, 1996). As more HIV-infected individuals access these treatments, higher survival rates coupled with continued increases in infected individuals will lead to greater numbers living with HIV (Ethier, Ickovics, & Rodin, 1996; Ferrando, 1998; Gordon *et al.,* 1996; Palella *et al.,* 1998). Furthermore, these individuals' needs regarding medical, legal, and social issues continue to grow and to become more complex (Ferrando, 1998). Thus, the focus of HIV/AIDS research is shifting somewhat: We are presently faced with assisting not only children who have been orphaned by AIDS, but also with helping families who, while they may not lose their infected family member to the AIDS epidemic, must continue to live underneath the shadow cast of a contagious, treatment-resistant, and terminal illness.

Although the social sciences have been examining HIV/AIDS since the 1980s, the majority of research and attention has focused on homosexual and intravenous drug use populations. The focus on these populations was prompted by the initial AIDS crisis, which primarily was concentrated within these groups. Yet, in the 1990s, the rates of HIV infection has begun to stabilize or decline for those in the homosexual and intravenous drug use populations (CDC, 1996) but have simultaneously increased within other groups. The rates of infection for women, and particularly minority women, have continued to increase (Rosenberg & Biggar, 1998): Women of childbearing age have become the fastest growing AIDS population. Moreover, AIDS is presently the leading cause of death for African American women between 20 and 44 years of age (Phillips, 1997). Until recently, these women, the majority of whom have children, have been largely invisible populations within the AIDS literature (Regan-Kubinski & Sharts-Hopko, 1995). These women merit attention, as they will either become increasingly ill and eventually die, leaving behind their orphaned children, or due to new treatments, many will continue to survive. Those who are able to survive on the new treatments will be permanently subjected to strict drug regimens, will be continuously vigilant in situations where they might unintentionally infect others (i.e., sexual relationships, blood spills), and will be parenting as HIV-infected individuals. For their children, both outcomes, either losing a parent or living with a terminally ill parent, present potential difficulties in psychosocial adjustment.

Previous research has indicated that children of HIV-infected mothers have more psychosocial adjustment difficulties (internalizing and externalizing) than do children of noninfected mothers (Forehand *et al.,* 1998; Forsyth, Damour, Nagler, & Adnopoz, 1996). The identification of difficulties in psychosocial adjustment of children whose mothers are HIV infected is crucial; however, adjustment of children whose mothers are HIV-infected, but are in different stages of infection, may differ. That is, psychosocial adjustment of only those children whose mothers are in one particular stage of infection (e.g., AIDS) may differ from adjustment of children whose mothers are not infected. If psychosocial adjustment difficulties do not manifest until HIV has proceeded to an advanced stage, it is possible that clinicians and medical professionals can assist parents and children through prevention and intervention efforts *before* child psychosocial adjustment is adversely affected. Alternately, without such information, clinicians will be unable to detect potential problems until after children have already begun to experience difficulties.

As most HIV-infected women are minorities, of low socioeconomic status, and reside in neighborhoods characterized by high crime, the initial asymptomatic stage of maternal HIV infection may not affect children's psychosocial adjustment. These families are already faced with more immediate stressors due to their living environment, and aspects relating to HIV infection may be less urgent for mothers, as long as they are not experiencing physical difficulties. Thus, it is possible that the children of HIV-infected women will be only minimally affected by their mother's illness until her physical symptoms emerge and her functioning becomes impaired. The appearance of symptoms may cause women to recognize their illness and face ensuing emotional issues such as death and permanent placement for their children.

Clearly, dealing with these issues may lead to adjustment difficulties for children of HIV-infected mothers. Research has shown that the problems with which children in HIV-infected families must cope often lead to depression and acting out behavior (Fair, DuPont Spencer, Weiner, & Riekert, 1995; Forehand *et al.,* 1998). Furthermore, when these children reach adolescence, there may be an even further increase in problems. Adolescents often engage in behaviors that could put them at risk for AIDS in their attempt to cope with the stress from family difficulties in dealing with a chronic, and often terminal, illness (Fair *et al.,* 1995).

Children's psychosocial adjustment difficulties can be assessed from varying perspectives, including that of the child and of the parent. A long history of research indicates that these two perspectives are only moderately related (Achenbach, McConaughy, & Howell, 1987). Furthermore, research with parental cancer suggests that an ill parent may not perceive their

child's psychosocial adjustment difficulties (Welch, Wadsworth, & Compas, 1996). Thus, when examining child adjustment problems in families with a maternal illness such as HIV infection, it is important to assess difficulties from the perspectives of both the parent and the child.

The purpose of the current study was to examine behavioral difficulties from child and mother perspectives during the three stages of HIV infection: asymptomatic, symptomatic, and AIDS. In addition, children whose mothers were not infected were included as a control sample. We hypothesize that different trajectories of child psychosocial adjustment difficulties will emerge for mother report and child report when the following four groups of mother-child dyads are examined: noninfected, asymptomatic, symptomatic, and AIDS. Specifically, based on child report, we expect there will be a linear increase in behavior problems from the noninfected group to the AIDS group. This hypothesis is based on the assumption that as mothers become increasingly ill, their physical problems and distress will disrupt child adjustment: Children will exhibit increasingly more internalizing and externalizing problems.

In contrast, we hypothesize that mothers will report a nonlinear trend for child behavior problems. Specifically, we expect a linear increase in mother report of child adjustment difficulties from the noninfected group to the infected, asymptomatic group and possibly to the symptomatic group. However, as mothers become increasingly ill and progress to full blown AIDS, the trend will be nonlinear as one of two data trends may emerge. First, mothers may experiences increasing difficulty in parenting as a result of increasing physical impairments and distress which may cause perceptions of child behavior to be negatively distorted. Thus, a nonlinear data trend would result from an abrupt increase in mother-reported child difficulties in the symptomatic or AIDS stage of infection. Alternately, as a mother becomes increasingly ill, she may have less contact with her child as others assume the major caregiving responsibilities (Schable *et al.,* 1995). In this case, children's behavior problems are less visible to the mother. Thus, a nonlinear data trend would result from a decrease in mother-reported child behavior problems in the latter stages of infection.

METHOD

Overview

The data from the present study are part of the Family Health Project, an ongoing longitudinal investigation that examines the psychological and sociological correlates of HIV infection in inner city, African-American

families (Family Health Project Research Group, 1998). The project was designed and is directed by an interdisciplinary team consisting of clinical psychologists, medical sociologists, a social psychologist, and a physician. Specifically, it examines the functioning of women, who are either HIV infected or self-identified as not HIV infected, and had one biological child between the ages of 6- and 11 years at the beginning of the project. In addition to the constructs examined in the current study, the Family Health project assesses the history of mothers' illness and its progression, patterns of disease disclosure, family relationships, social support for children, emotional and cognitive functioning, and sociodemographic variables related to HIV disease.

Participants

Participants were 99 HIV-infected women and 1 of their noninfected 6- to 11-year-old children, and 148 women who did not self-identify as being HIV infected (subsequently referred to as noninfected) and one of their 6- to 11-year-old children who, based on mother report, also was not infected.[6] All participants were African American and were recruited from the inner-city area of New Orleans. The majority of participants live in government housing projects that are characterized by overcrowding, high levels of poverty, and crime.

Participants in the HIV-infected group were recruited across two years from the primary public HIV Clinic in the city of New Orleans (93%) and the private practices of physicians treating HIV-infected females (7%). At a regularly scheduled checkup, a project staff member approached women who met the inclusion requirements. The staff member explained the study, confirmed eligibility, and scheduled a data collection session.

A stratified random sample of noninfected women and their children was drawn from the same zip code areas in which the HIV-infected sample resided. The noninfected sample was stratified based on school attended, gender of child, and age of child. It was drawn in two equal waves spanning two school years. Mother-child dyads were recruited through five of the six public schools serving the targeted zip code areas. In each of the two waves, letters describing the study and inviting participation were sent home to 30 African-American mothers who were randomly selected by personnel at each school. In each wave, the first 15 women at each school

[6]In research with similar populations, the percentage of women who self-identify as noninfected, but who are actually HIV infected, is less than 1% (Moore, personal communication, February 22, 1996).

to return a reply card constituted the sample. Women in this group identified themselves as noninfected in the first interview.

For the HIV-infected group, 95% of the women who were approached agreed to, and did participate, in each of two scheduled interviews. For the noninfected group, 94% of the women returned the reply card indicating an interest in participating. Of the women selected for participation based on first return of their cards, 100% participated in an initial interview and 99% of these participated in the second interview.

Eligibility criteria for all participants included the following: Women were in the 18- to 45-year-old range; had at least one biological child in the 6- to 11-year-old age range who resided in her home and who was not identified by the mother as HIV infected, and who attended regular classes in school (i.e., not special education). Only women who initially reported not having used intravenous drugs for at least the past 6 months were included in the study. In order to study women who are in a relatively advanced stage of infection, women in the HIV-infected group were limited to those with a CD-4 count (a prognostic value for predicting the development of AIDS in individuals who are HIV infected) under 600.

The disease status of the HIV-infected women was classified from medical records according to CDC (1992) HIV staging procedures, resulting in 54%, 21%, and 25% being classified as asymptomatic, symptomatic, and AIDS-diagnosed, respectively. Time since HIV diagnosis was 3.1 years (SD = 2.1 years).

Demographic characteristics for both groups and results of tests for group differences are reported in Table I. As is evident, the groups differed significantly on five demographic variables: mother's age, current drug use, past drug use, child age, and number of children living with the mother.

Interviewers and Interviewer Training

Because two types of interviews were administered to each participant (sociological and psychological interviews), two sets of interviewers were utilized. Interviewers in both sets interviewed approximately equal numbers of participants from the HIV-infected and noninfected groups. The first set consisted of five individuals (two Ph.D. medical sociologists, one licensed social worker, and two graduate students in public health), all with extensive experience working with inner-city African American HIV-infected and noninfected women. The second set of interviewers consisted of nine clinical psychology doctoral candidate graduate students and two Ph.D. licensed clinical psychologists, all with extensive experience in interviewing and assessing adults' and children's individual and interpersonal psychosocial

Table I. Sample Characteristics of Maternal HIV-Infected and Noninfected Groups[a]

Characteristics	Noninfected Mean or %[b]	Asymptomatic Mean or %	Symptomatic Mean or %	AIDS Mean or %	F^2 Value	X^2 Value
Mother						
Age (yrs.)	32.91	30.22	31.61	31.61	3.34*	
	(5.79)	(5.17)	(5.51)	(4.88)		13.19
Education						
Less than HS	48%	33%	29%	48%		
HS or GED	30%	44%	29%	32%		
HS+ voc training	10%	6%	9%	8%		
Some college	12%	17%	33%	12%		
Monthly income	$703	$558	$635	$722	1.50	
	(488.40)	(374.15)	(411.23)	(424.37)		
Current drug use[c]	3%	4%	5%	16%		8.95*
Past drug use[d]	0%	13%	10%	8%		21.27**
Marital status						3.19
Married	19%	13%	10%	8%		
Not married	81%	87%	90%	92%		
Child						
Age (yrs.)	8.55	8.17	7.90	9.16	2.71*	
	(1.71)	(1.84)	(1.70)	(1.65)		
Gender						4.33
Female	50%	48%	43%	28%		
Male	50%	52%	57%	72%		
Family						
Children[e]	3.30	2.44	2.81	2.65	4.43**	
	(1.50)	(1.28)	(1.99)	(1.12)		

[a]Standard deviation in parentheses.
[b]$df = (3,243)$.
[c]Currently using street drugs (crack, cocaine, and/or heroin).
[d]Past use of street drugs. Note that chi-square may not be a valid test because 25% of cells have expected count less than (5).
[e]Number of children living with mother.
*$p < .05$.
**$p < .01$.

functioning. All interviewers were thoroughly trained in the use of their respective instruments during the pilot phases of the project. The goals of training were ensuring cross-interviewer reliability and enhancing sensitivity to cultural and socioeconomic status differences.

Regarding interviewer characteristics, focus group participants indicated that interviewer ethnicity was not an issue in terms of their willingness to self-disclose, their general comfort level, and their willingness to return for subsequent assessments. Thus, ethnicity was not a basis for selection of interviewers and both African American and Caucasian interviewers were utilized. Because the psychosocial interview inquires about extremely personal information (e.g., history of rape and sexual abuse), only female interviewers were used in this interview with mothers. Both female and male interviewers were utilized with children.

Instruments

In order to utilize measures that were culturally sensitive and appropriate for the target population, a number of steps were undertaken, including four focus groups with women who were HIV-infected. Each instrument utilized to assess child psychosocial adjustment was selected, in part, because these women viewed it as age appropriate. [See Family Health Project Research Group, (1998) for more information.]

Demographic Information and Drug Use

Demographic information (e.g., age of mother, age of child, education) was obtained from the mother and child. Furthermore, each mother was asked if she currently used crack or cocaine, or heroin and if she had used any of these drugs in the past.

Health Status

For HIV-infected mothers, information regarding health status (e.g., CD4 counts, number of opportunistic diseases) was obtained via medical chart review. This information then was utilized by an infectious disease specialist, using CDC staging, to classify each woman as asymptomatic, symptomatic, or AIDS diagnosis.

Child Psychosocial Adjustment

Mother and child reports on standardized instruments were utilized to assess two areas of child psychosocial adjustment: Externalizing Problems and Internalizing Problems. The preliminary evaluation of each instrument completed by mother and child depended upon whether the instrument had been utilized with samples similar to the one studied in this report. For instruments not used with similar samples, confirmatory factor analysis, with retention of items loading 40 and higher, was conducted. Subsequently an alpha coefficient was calculated for retained items. For instruments with standardization data with samples similar to the current one, only an alpha coefficient was calculated. Only instruments with an alpha coefficient of .70 or higher were retained and examined as dependent variables.

The mother completed the Child Behavior Checklist (CBCL; Achenbach, 1991). The 113 items, describing child problem behaviors, are rated on a 3-point scale for the target child: 0 (*Not True*), 1 (*Sometimes or Somewhat True*), or 2 (*Very or Often True*). Broadband categories of externalizing and internalizing problems were examined. Achenbach (1991a) reports mean test-retest reliability of .87, as well as evidence for content and criterion-related validity with samples similar to the current one included in the standardization data. The alpha coefficients for our sample were .90 and .84 for externalizing and internalizing problems, respectively. As recommended by Achenbach (1991a), raw scores were converted to *T* scores (Mean = 50, *SD* = 10), which could range from 30 to 100 with higher scores indicating more behavior problems.

The child completed the Aggressive Behavior Scale from the Youth Self-Report of the CBCL (Achenbach, 1991b) as a self-report indicator of externalizing problems. This subscale, selected because it assesses the types of externalizing problems typically displayed by 6- to 11-year-old children, has acceptable reliability and validity data (Achenbach, 1996); however, it was not standardized with 6- to 11-year-old children. Consequently, we initially conducted a confirmatory factor analysis, specifying one factor, and retained 16 of the 19 items. The alpha coefficient was .83. Scores could range from 0 to 32 with high scores indicating higher levels of externalizing problems.

The child completed the Children's Depression Inventory (CDI; Kovacs, 1981) as a self-report indicator of internalizing problems. This inventory was selected because depressive symptoms were hypothesized to be the type of internalizing problem that children of HIV-infected mothers would display. In addition, adequate reliability and validity data exist with similar samples (e.g., Fitzpatrick, 1993). The CDI consists of 27 items, each rated on a 3-point scale. Standardization data are available for children

ranging in age from 7 to 17. A mean score of 9 ($SD = -7$) has been reported across various samples (Finch, Saylor, & Edwards, 1985; Fitzpatrick, 1993; Kovacs, 1981). The alpha coefficient for the current sample was .79. Scores could range from 0 to 54 with higher scores indicating more depression.

Procedure

In order to hold constant the impact that the child's attendance at school may have on interaction patterns between mother and child, all data collection sessions were conducted while the child's school was in session (e.g., not during summer or Christmas breaks). Each noninfected woman and her child were assessed at the child's school while each HIV-infected woman and her child were assessed in a medical setting. When necessary, a taxicab was provided for transportation. Upon arrival, the mother read and signed a consent form and was reassured of confidentiality. Subsequently, the mother and child were separately administered the sociological interview during which demographic and other information (e.g., qualitative accounts of stigma, frequency of hospitalization, co-caregiver interactions) was obtained. The interview with the mother and child lasted approximately 1 hr and 1/2 hr, respectively. Participants received $50 per dyad as compensation.

A second interview followed the sociological interview within a window of time from 2 days to 2 weeks. The purpose of this interview was to assess the psychosocial functioning of the mother and child, including all of the dependent variables used in the current report. This interview lasted approximately 2 hr for mothers and 1 hr for children.

In some instances in the second interview, questionnaires had to be eliminated because the data were deemed invalid by the interviewer. The criterion for elimination was when a participant did not comprehend the meaning of questions and would not respond, responded randomly, responded with the same response to all questions, or directly indicated a lack of comprehension. The interviewer made the decision about the validity of the participant's responses.

Within each session for the HIV-infected and non-infected mothers and their children, all material was administered orally to participants. In addition, cue cards were used in the second interview. These cue cards contained the descriptors (e.g., "not true," "sometimes true," "often true"), their corresponding numeric values (e.g., 0, 1, or 2), and pictorial representations of the descriptors (e.g., thermometers with various portions shaded).

RESULTS

Twenty-one and 14 children, respectively, were not able to complete the Children's Depression Inventory and the Aggressive Behavior Subscale as they failed to understand the instructions. Therefore, the sample size utilized in analysis was smaller for the child report than for mother report.[7]

Preliminary analyses indicated that neither child gender nor child age qualified the relationship between maternal status and child psychosocial adjustment. Therefore, these variables were not considered in the primary analyses.

Figure 1 presents the means for each of the four groups (noninfected, infected-asymptomatic, infected-symptomatic, AIDS mothers) for mother reported and child reported externalizing and internalizing problems. A different trend in the data for mother report versus child report is evident. For child report, a linear trend emerged: As the mother's HIV status moves from noninfected to increasingly severe stages of infection, there is a linear increase in child reported internalizing and externalizing problems. Not surprisingly, a linear trend analysis confirmed that the trend is linear for both internalizing (F (1,220) = 5.41, $p < .05$) and externalizing (F (1,227) = 6.14, $p < .05$) problems. When the linear trend analyses were adjusted for variables which differed significantly among groups (i.e., mother's age, child's age, number of children living in the home, number of mother reporting current street drug use (intravenous and nonintravenous), and number of mothers reporting ever having used intravenous drugs—see Table I), the linear trend analysis for child internalizing problems continued to be significant (F (1,214) = 5.58, $p < .05$) whereas the linear trend analysis for child externalizing problems approached the traditionally accepted significance level (F (1,221) = 3.10, $p = .07$).

In contrast, as is evident in Fig. 1 and confirmed by a linear trend analysis, neither mother reported child internalizing (F (1,241) = .74) nor child externalizing (F (1,241) = .51) problems displayed a significant linear trend. An increase in problems was evident as the mother's HIV status changed from noninfected to infected asymptomatic to infected symptomatic; however, in the AIDS stage of infection, the level of internalizing and externalizing problems decreased and was similar to that reported in the noninfected and infected-asymptomatic groups. When the linear trend analyses were adjusted for the five demographic variables that differed among groups, the analyses for mother reported internalizing (F (1,235) = .03) and externalizing (F (1,235) = .07) problems continued to be nonsignificant.

[7]We conducted the analyses on mother perceptions of child internalizing and externalizing problems utilizing only those participants for whom we had both child and mother report. The findings did not differ from those we report here.

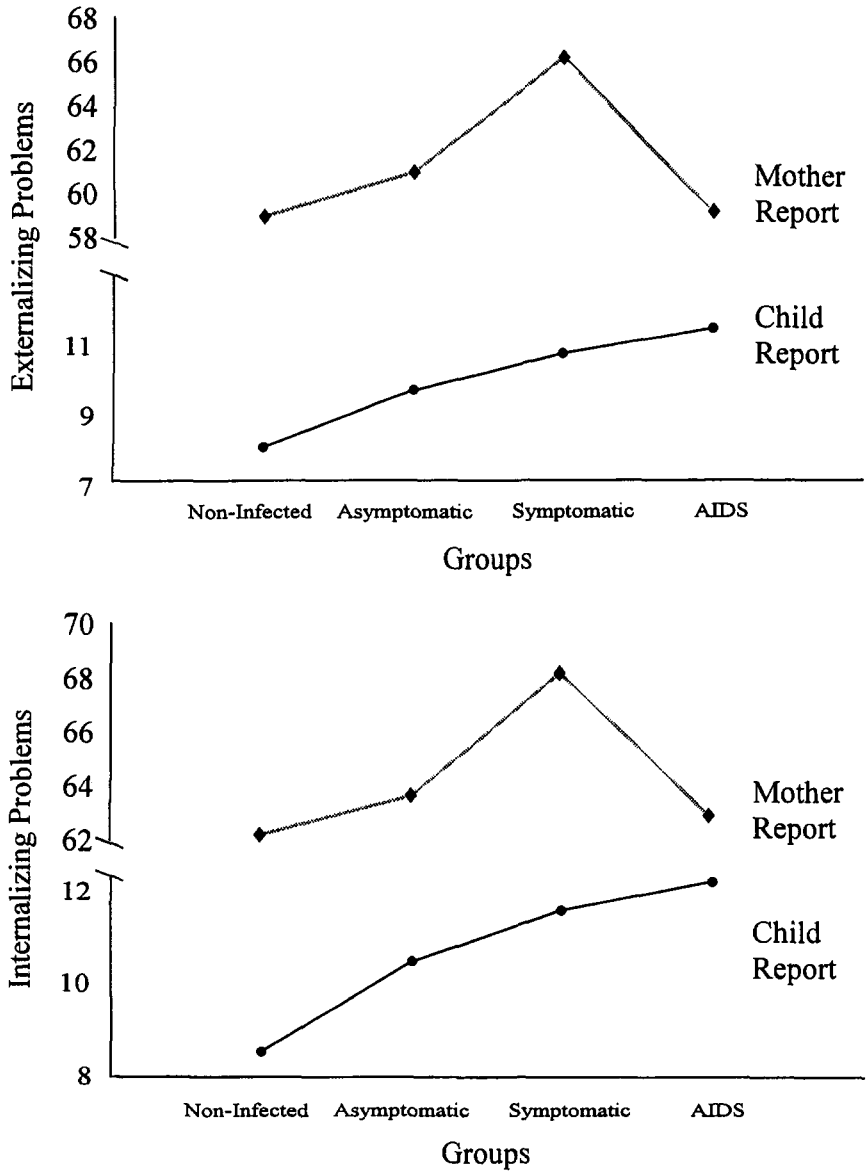

Fig. 1. The relationship between maternal stage of HIV-infection and child externalizing (upper panel) and internalizing problems (lower panel) based on child report and mother report.

In order to further examine the relationship between child report and mother report, correlations were computed. Child and mother report of externalizing problems were correlated significantly ($r = .18$, $p < .01$) but rather weakly whereas child and mother report of internalizing problems were not significantly correlated ($r = .09$).

DISCUSSION

The purpose of the present study was to examine child psychosocial adjustment in different stages of maternal HIV infection: asymptomatic, symptomatic, and AIDS. In order to obtain the perspectives of the mother and child, both individuals reported on child behavioral difficulties. The two perspectives were not only weakly correlated, but followed different pattens across stages of maternal HIV infection. As hypothesized, children reported progressively more internalizing and externalizing difficulties as the stage of maternal illness advanced. In regard to mother report, a non-linear relationship between severity of illness and child behavioral difficulties was hypothesized. More specifically, two competing hypotheses were tested: In the latter stages of infection, mothers would report either an abrupt increase, or a decrease, in adjustment difficulties relative to the prior stage of infection. The data supported the latter of the two hypotheses—mother's report of child psychosocial adjustment difficulties was linear when examining the non-infected, infected-asymptomatic, and infected symptomatic groups. However, in the AIDS group, mothers reported a dramatic decrease in child internalizing and externalizing problems.

The discrepancy between mother and child report presents an interesting question: Why do mothers who are in the AIDS stage report less adjustment difficulties in their children than mothers in the symptomatic stage, a trend directly opposite of that reported by children? There are three possible explanations for this difference in report. First, HIV-infected women report that both their children and parenting are priorities in their lives (Armistead & Forehand, 1995). Thus, as their illness increases and women begin to contemplate potential death, they may not want to believe that their children are having increasing psychosocial adjustment difficulties. Second, once women have reached the AIDS stage, they may not be integrally involved in all aspects of their children's lives. Frequent hospitalizations and being bedridden at home likely require that a mother solicit support in raising her children. Thus, she may become less involved in the actual day-to-day activities, such as disciplining and childcare. In this case, a mother would be less aware of her children's problems, as others would handle the majority of childcare tasks. Third, children may realize how sick

their mother has become and, as a result, hide their difficulties from their mother in order to keep from burdening her further.

Each of these three explanations suggests that a mother in the AIDS stage of infection has distorted perceptions or is unaware of her children's difficulties. An alternative explanation is that the mother is accurate in her perceptions and it is the child of a mother with AIDS who is inaccurate in her or his report. For example, these children may be over-reporting their behavioral difficulties in an attempt to draw attention to themselves. In any case, the results of the current study raise the question: Do mothers know best? Unfortunately, this question can not be answered, as there is no absolute "gold standard" of who is an accurate reporter. In future research data from a third source, such as observational data or data from a teacher, could help address the issue of reporter accuracy. Nevertheless, our data suggest that a mother and her child differ in perceptions of child psychosocial adjustment across the stages of maternal HIV infection and, importantly, we believe that the child's perspective cannot be ignored. Even if children are inaccurately reporting their own problems and mothers do indeed know best, the reasons why children might do so merit attention.

The current study is the first to compare the psychosocial adjustment of children whose mothers are at the different stages of HIV infection. Understanding at what point in a mother's illness children begin to experience difficulties, and the pattern of difficulties they will experience, is crucial in helping children cope with the potentially negative sequel of maternal HIV/AIDS infection. Clinicians, medical personnel, and other individuals who are in contact with HIV-infected parents need to be cognizant of these issues. In addition, it is imperative that they do not solely rely on the parent's perspective of child well being. Obtaining child self-report information is critical; otherwise, many children in need of services may be overlooked.

Our findings also point to the need to consider disease stage when designing and implementing programs to assist children and families in coping with parental illness. If families can be introduced into services during the initial stages of maternal HIV infection, children's psychosocial adjustment may be bolstered so that they are equipped to weather their mother's increasing illness more competently. Conversely, children whose mothers are further along in disease stage potentially may require more intense interventions in helping to decrease already existing psychosocial adjustment difficulties. Child psychosocial adjustment could be further compounded by maternal lack of awareness regarding how well, or in this case how poorly, children are faring. However, our findings should be generalized with caution, as the study is limited by the use of cross-sectional data. Studies that use longitudinal data and follow the same children and mothers throughout the course of HIV infection may provide knowledge

on changes that occur as mothers become progressively ill and potentially die. Certainly, more research is needed that might clarify some of the complex relationships between maternal illness, child adjustment, and accuracy of reporting.

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